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July 19, 2002

Mr. Ken Theisen  
USEPA/Region V  
77 West Jackson Boulevard HSE-5J  
Chicago, IL 60604

Subject: Enhanced Product Recovery Work Plan  
Sylvan Slough Removal Action Site  
Rock Island, Illinois  
Delta Project No. A097-130

Dear Mr. Theisen:

This work plan details proposed supplementary remedial actions for the Sylvan Slough site located in Rock Island, Illinois. The activities presented herein are designed to recover free product from monitoring wells and extraction wells, and evaluate the potential for alternative methods to accelerate reduction in product levels throughout the site.

### **Product Thicknesses**

Ground water and product levels are measured monthly at the extraction system recovery wells, and quarterly at accessible site monitoring wells. Ground water elevation and product thickness data collected at the site monitoring wells and recovery wells since June 2001 are summarized on Tables 1 and 2, respectively. Well locations are shown on Figure 1.

Product has been measurable in up to 14 monitoring wells during the quarterly monitoring events. Significant fluctuations in product thicknesses have been observed within monitoring wells between measurements. As shown on Table 1, thicknesses of more than 1 foot have been measured at GM6-99, GM-20D, and RW3 on at least one occasion during the past year of monitoring. Thicknesses of between 0.5 foot and 1 foot were observed at least once in wells GM1, GM27D, GM29D, and GM30. Product was also present at thicknesses of less than 0.5 foot at wells GM2, GM19S, GM20S, RW1, C1, E1, G2, and MW11-99.

Product has been measurable at least once in 16 of the 20 recovery wells since June 2001. Fluctuations in product thicknesses have been observed during monthly recovery well measurements. As shown on Table 2, thicknesses of more than 1 foot have been measured at GM-23D, GM24D, GM-28D, and J2 on at least one occasion during the past year of monitoring. Thicknesses of between 0.5 foot and 1 foot were observed at least once at GM22D, GM24S, GM29S, and RW-5. Oil was also present at thicknesses of less than 0.5 foot at wells GM25D, GM28S, GM31, GM32, RW6, RW7, C2, and C3.

During the most recent quarterly event, conducted in May 2002, product was measurable in monitoring wells GM20S (0.01 foot), GM20D (7.36 feet), GM27D (0.53 foot), GM29D (0.71 foot), GM30 (0.83 foot), RW3 (2.85 feet), and G2 (0.05 foot). Product was measurable in extraction wells GM24S (0.40 foot), GM24D (1.36 feet), GM31 (0.24 foot), RW5 (0.11 foot), RW6 (0.21 foot), RW7 (0.10 foot), C2 (0.06 foot), C3 (0.11 foot), and J2 (0.89 foot) during the most recent monthly site visit performed on July 16, 2002.



A Member of:



### **Product Recovery**

Based on the reduction of product recovered by the site extraction system over the course of its operation, and the remaining thicknesses, Delta proposes that a combination of Enhanced Fluid Recovery Technology (EFRT) and downhole product absorbent socks be used on a trial basis to evaluate the ability of the procedures to accelerate reduction in product thicknesses throughout the site.

Prior to any additional remedial activity, one complete round of baseline ground water elevation and product thickness measurements will be conducted at the site in August 2002 to ascertain current conditions. The site extraction system will be shut down during the measurement and product recovery events described herein.

### **Enhanced Fluid Recovery Technology (EFRT)**

EFRT is a process by which free-phase hydrocarbon fluids are extracted from wells using vacuum. A drop pipe is lowered to the ground water/oil interface and vacuum is applied using a mobile vacuum truck capable of approximately 20 inches of mercury. Recovered fluids are drawn into the truck storage tank.

Using the baseline monitoring results described above, EFRT will be applied at all wells in which product is measured during the August 2002 monitoring. Based on the most recent measurements, EFRT would be performed at monitoring wells GM20S, GM20D, GM27D, GM29D, GM30, RW3, and G2; and extraction wells GM24S, GM24D, GM31, RW5, RW6, RW7, C2, C3, and J2 unless any of these locations does not contain measurable product during the August 2002 measurement event.

At each location, vacuum will be applied for up to 10 minutes or until all measurable product is removed from the well. The vacuum and extracted air and water flow rates will be measured and documented. After EFRT has been applied, ground water elevations and product thicknesses will be measured at each point at approximate frequencies of hourly for the first four hours, four times daily for the next two days, daily for the next four days, and biweekly until the measurements stabilize. These product thickness recovery measurements will be used to produce graphs of oil infiltration rates and to determine patterns of induced product flow toward the extraction points. The results will be also be used to evaluate optimal EFRT events for future product recovery.

Water and free product recovered during the EFRT event will be stored in the vacuum truck and transported off site for disposal at a licensed facility.

### **Downhole Product Socks**

Downhole product socks contain materials that selectively absorb petroleum products, but not water, and are available in sizes made for placement in 2-inch and larger wells. These socks have been demonstrated to work at the site. A recovery sock was placed in extraction well G3, at which product was generally present at approximately 0.01 to 0.03 foot from 1998-2001. Following removal of the sock in April 2001, oil has not been observed in the well. A sock was also placed in well GM32 in April 2002. As shown on Table 2, oil has not been measurable in this well since that time.

Recommended applications of the oil-absorbent socks include final polishing of recovery wells, use at peripheral locations, and/or recovery at wells with minor thicknesses. Socks are generally available in 2-inch diameter (0.1 gallon capacity), 3-inch diameter (0.37 gallon capacity), and 8-inch diameter (1.8 gallon capacity) sizes.

Based on their intended use, Delta recommends placement of absorbent socks in all wells at which EFRT is performed following the event to remove residual product. Monitoring of product thicknesses and change out of spent absorbent socks will be conducted as described in the following section of this work plan.

### **Product Recovery Monitoring**

Following the EFRT event and oil-sorbent sock placement, monitoring of the relevant wells will be performed monthly. Complete rounds of ground water elevations will be conducted quarterly.

Spent oil-sorbent socks will be removed from the wells, replaced with new materials, and properly disposed at a licensed facility.

Adjustments to product recovery methods, such as the need for additional EFRT events or restarting of the system, will be continually evaluated during the course of the monitoring. Enviromark will continue to perform weekly site visits to check for sheen on the adjacent river surface, and to ensure that the area remains secure. As has been done in the past, oil-sorbent booms will be placed in the river if sheens are noted. No sheen has been observed thus far in 2002.

Delta will continue to submit monthly project status reports documenting the recovery event and continual monitoring and adjustments. The need for additional remedial activities would be submitted in a work plan proposal if necessary.

If you have any questions regarding this work plan and proposed activities, please contact me at (651) 697-5243.

Sincerely,

**DELTA ENVIRONMENTAL CONSULTANTS, INC.**



Dean A. Krebs, P.E.  
Project Engineer/Project Manager

DAK/mjw

Attachments: Figure 1 Site Map

Table 1 Monitoring Well Product Thicknesses  
Table 2 Recovery Well Product Thicknesses

cc: Mr. Gregory Jeffries – Burlington Northern Santa Fe  
Mr. Jack Shih – Navistar International Transportation Corp.  
Mr. Doug Wilson – Maytag Corporation





Table 1  
Monitoring Well Product Thicknesses  
Sylvan Slough - Rock Island, IL  
Delta No. A097-130

6/13/2001					9/5/2001					11/15/2001				
Well No.	Depth to Water (ft)	Depth to Product (ft)	Product Thickness	Corrected Water Elevation	Well No.	Depth to Water (ft)	Depth to Product (ft)	Product Thickness	Corrected Water Elevation	Well No.	Depth to Water (ft)	Depth to Product (ft)	Product Thickness	Corrected Water Elevation
GM1	5.40	5.30	0.10	559.55	GM1	12.66	11.97	0.69	552.80	GM1	13.31	12.82	0.49	551.98
GM2	5.40	5.36	0.04	559.24	GM2	12.82		0.00	551.78	GM2	13.62		0.00	550.98
GM3	7.04	7.03	0.01	558.64	GM3	14.18		0.00	551.49	GM3	14.85	14.51	0.34	551.12
GM4	6.43		0.00	559.17	GM4	13.33		0.00	552.27	GM4	13.68		0.00	551.92
GM6-99	9.14	8.12	1.02	557.53	GM6-99	18.87	15.55	3.32	549.82	GM6-99	18.31	15.59	2.72	549.85
GM7	13.13		0.00	556.64	GM7	17.20		0.00	552.57	GM7	17.97		0.00	551.80
GM8	10.78		0.00	554.74	GM8	11.16		0.00	554.36	GM8	11.55		0.00	553.97
GM19S	16.48		0.00	555.58	GM19S	22.30	22.28	0.02	549.78	GM19S	22.39		0.00	549.67
GM19D	17.47		0.00	554.38	GM19D	23.73		0.00	548.12	GM19D	23.33		0.00	548.52
GM20S	10.60	10.35	0.25	557.43	GM20S	14.68	14.67	0.01	553.14	GM20S	15.30		0.00	552.51
GM20D	20.62	12.77	7.85	554.11	GM20D	21.00	20.05	0.95	547.69	GM20D	20.47	19.43	1.04	548.30
GM21	14.58		0.00	556.79	GM21	21.28		0.00	550.09	GM21	22.28		0.00	549.09
GM22S	13.26		0.00	557.51	GM22S	17.43		0.00	553.34	GM22S	18.02		0.00	552.75
GM23S	NM		0.00	NM	GM23S	NM		0.00	NM	GM23S	NM		0.00	NM
GM25S	11.93		0.00	556.54	GM25S	15.57		0.00	552.90	GM25S	16.35		0.00	552.12
GM26S	15.81		0.00	556.54	GM26S	19.67		0.00	552.68	GM26S	20.00		0.00	552.35
GM26D	18.34		0.00	554.06	GM26D	24.55		0.00	547.85	GM26D	23.99		0.00	548.41
GM27S	10.99		0.00	556.71	GM27S	14.67		0.00	553.03	GM27S	15.19		0.00	552.51
GM27D	13.18	12.84	0.34	554.77	GM27D	19.78	19.31	0.47	548.28	GM27D	19.50	18.95	0.55	548.63
GM29D	13.90	13.67	0.23	554.13	GM29D	19.91		0.00	547.92	GM29D	20.07	19.42	0.65	548.33
GM30	NM		0.00	NM	GM30	20.35	19.60	0.75	547.81	GM30	19.98	19.12	0.86	548.27
RW1	11.94		0.00	556.92	RW1	15.83		0.00	553.03	RW1	16.35		0.00	552.51
RW2	13.14		0.00	556.57	RW2	17.75		0.00	551.96	RW2	17.20		0.00	552.51
RW3	16.59	13.99	2.60	554.11	RW3	20.25		0.00	548.17	RW3	22.32	19.75	2.57	548.35
A1	11.15		0.00	558.22	A1	15.58		0.00	553.79	A1	16.59		0.00	552.78
A2	6.93		0.00	559.47	A2	12.76		0.00	553.64	A2	12.76		0.00	553.64
A3	4.28		0.00	559.43	A3	10.11		0.00	553.60	A3	10.11		0.00	553.60
B1	10.36		0.00	558.56	B1	15.66		0.00	553.26	B1	16.26		0.00	552.66
B2	NM		0.00	NM	B2	NM		0.00	NM	B2	NM		0.00	NM
C1	NM		0.00	NM	C1	NM		0.00	NM	C1	NM		0.00	NM
E1	12.95		0.00	557.02	E1	NM		0.00	NM	E1	18.49	18.48	0.01	551.49
F1	14.05		0.00	554.59	F1	20.45		0.00	548.19	F1	20.10		0.00	548.54
F2	15.15		0.00	554.28	F2	21.55		0.00	547.88	F2	21.05		0.00	548.38
F3	14.92		0.00	554.35	F3	21.29		0.00	547.98	F3	20.83		0.00	548.44
G1	13.47		0.00	556.63	G1	19.93		0.00	550.17	G1	19.41		0.00	550.69
G2	15.93	15.60	0.33	554.56	G2	NM		0.00	NM	G2	21.80	21.73	0.07	548.46
RW12	13.52		0.00	556.15	RW12	19.84		0.00	549.83	RW12	19.23		0.00	550.44
J1	12.31		0.00	554.24	J1	18.64		0.00	547.91	J1	18.64		0.00	547.91
MW5	13.22		0.00	557.45	MW5	18.71		0.00	551.96	MW5	18.71		0.00	551.96
MW7	10.97		0.00	NA	MW7	15.96		0.00	NA	MW7	16.08		0.00	NA
MW8	8.00		0.00	558.28	MW8	14.44		0.00	551.84	MW8	14.99		0.00	551.29
MW9-99	14.77		0.00	555.35	MW9-99	NM		0.00	NM	MW9-99	18.87		0.00	551.25
MW11-99	6.19	6.12	0.07	NA	MW11-99	11.69	11.68	0.01	NA	MW11-99	12.26		0.00	NA

Table 1  
Monitoring Well Product Thicknesses  
Sylvan Slough - Rock Island, IL  
Delta No. A097-130

2/19/2002					5/9/2002				
Well No.	Depth to Water (ft)	Depth to Product (ft)	Product Thickness	Corrected Water Elevation	Well No.	Depth to Water (ft)	Depth to Product (ft)	Product Thickness	Corrected Water Elevation
GM1	14.29	14.06	0.23	550.77	GM1	10.20		0.00	554.66
GM2	14.78		0.00	549.82	GM2	9.77		0.00	554.83
GM3	15.75	15.35	0.40	550.27	GM3	10.76		0.00	554.91
GM4	14.96		0.00	550.64	GM4	10.62		0.00	554.98
GM6-99	17.89	16.32	1.57	549.26	GM6-99	10.89		0.00	554.89
GM7	18.57		0.00	551.20	GM7	15.09		0.00	554.68
GM8	12.91		0.00	552.61	GM8	10.32		0.00	555.20
GM19S	23.07	23.05	0.02	549.01	GM19S	17.36		0.00	554.70
GM19D	23.56		0.00	548.29	GM19D	17.71		0.00	554.14
GM20S	16.28	16.06	0.22	551.72	GM20S	12.92	12.91	0.01	554.90
GM20D	20.62	19.68	0.94	548.06	GM20D	20.30	12.94	7.36	554.00
GM21	22.71		0.00	548.66	GM21	16.50		0.00	554.87
GM22S	18.93		0.00	551.84	GM22S	15.86		0.00	554.91
GM23S	15.98		0.00	NM	GM23S	12.57		0.00	NM
GM25S	16.96		0.00	551.51	GM25S	13.78		0.00	554.69
GM26S	20.54		0.00	551.81	GM26S	17.37		0.00	554.98
GM26D	24.51		0.00	547.89	GM26D	16.28		0.00	556.12
GM27S	15.90		0.00	551.80	GM27S	12.71		0.00	554.99
GM27D	19.66	19.28	0.38	548.32	GM27D	14.05	13.52	0.53	554.06
GM29D	20.36	19.70	0.66	548.05	GM29D	14.39	13.68	0.71	554.06
GM30	20.19	19.33	0.86	548.06	GM30	14.23	13.40	0.83	554.00
RW1	17.07	17.06	0.01	551.80	RW1	13.81		0.00	555.05
RW2	19.70		0.00	550.01	RW2	14.72		0.00	554.99
RW3	22.61	20.05	2.56	548.05	RW3	16.89	14.04	2.85	554.02
A1	17.58		0.00	551.79	A1	14.49		0.00	554.88
A2	14.63		0.00	551.77	A2	11.96		0.00	554.44
A3	11.88		0.00	551.83	A3	9.30		0.00	554.41
B1	17.27		0.00	551.65	B1	14.15		0.00	554.77
B2	15.21		0.00	NM	B2	11.90		0.00	NM
C1	15.87	15.80	0.07	NM	C1	12.40		0.00	NM
E1	19.10	18.94	0.16	551.01	E1	14.95		0.00	555.02
F1	20.40		0.00	548.24	F1	14.51		0.00	554.13
F2	21.40		0.00	548.03	F2	15.35		0.00	554.08
F3	21.12		0.00	548.15	F3	15.19		0.00	554.08
G1	19.69		0.00	550.41	G1	13.65		0.00	556.45
G2	22.12	22.05	0.07	548.14	G2	16.10	16.05	0.05	554.14
RW12	19.46		0.00	550.21	RW12	13.35		0.00	556.32
J1	18.40		0.00	548.15	J1	12.45		0.00	554.10
MW5	20.03		0.00	550.64	MW5	16.02		0.00	554.65
MW7	16.48		0.00	NA	MW7	12.15		0.00	NA
MW8	15.77		0.00	550.51	MW8	11.55		0.00	554.73
MW9-99	19.19		0.00	550.93	MW9-99	17.07		0.00	553.05
MW11-99	13.17		0.00	NA	MW11-99	10.39		0.00	NA

NA = well survey data not available.

NM = elevation not measured.

**Table 2**  
**Recovery Well Product Thicknesses**  
**Sylvan Slough - Rock Island**  
**Delta No. A097-130**

6/13/2001					7/11/2001					8/2/2001				
Well No.	TOC Depth to Water (ft)	TOC Depth to Product (ft)	Product Thickness (ft)	Corrected Water Elevation (ft)	Well No.	TOC Depth to Water (ft)	TOC Depth to Product (ft)	Product Thickness (ft)	Corrected Water Elevation (ft)	Well No.	TOC Depth to Water (ft)	TOC Depth to Product (ft)	Product Thickness (ft)	Corrected Water Elevation (ft)
GM22D	17.02		0.00	554.11	GM22D	19.54	19.53	0.01	551.60	GM22D	22.59	22.45	0.14	548.66
GM23D	16.89		0.00	553.97	GM23D	19.53		0.00	551.33	GM23D	24.03	22.10	1.93	548.52
GM24S	14.91		0.00	555.38	GM24S	16.12	15.97	0.15	554.30	GM24S	18.14		0.00	552.15
GM24D	17.30	17.14	0.16	554.15	GM24D	20.12	19.72	0.40	551.54	GM24D	24.72	22.27	2.45	548.73
GM25D	11.72		0.00	560.16	GM25D	20.34		0.00	551.54	GM25D	23.15		0.00	548.73
GM28S	13.18		0.00	557.55	GM28S	14.43		0.00	556.30	GM28S	16.03		0.00	554.70
GM28D	16.57	16.43	0.14	554.39	GM28D	19.05	19.03	0.02	551.81	GM28D	21.88	21.86	0.02	548.98
GM29S	14.65		0.00	556.51	GM29S	15.72		0.00	555.44	GM29S	17.03		0.00	554.13
GM31	17.00		0.00	554.29	GM31	19.56	19.54	0.02	551.75	GM31	22.53	22.48	0.05	548.80
GM32	12.87		0.00	558.15	GM32	15.48		0.00	555.54	GM32	18.55	18.30	0.25	552.69
RW4	16.77		0.00	554.18	RW4	19.29		0.00	551.66	RW4	22.19		0.00	548.76
RW5	16.79	16.73	0.06	554.31	RW5	19.43	19.35	0.08	551.69	RW5	22.22	22.21	0.01	548.84
RW6	16.88		0.00	554.07	RW6	19.44		0.00	551.51	RW6	22.45	22.25	0.20	548.68
RW7	16.88		0.00	554.07	RW7	19.47	19.46	0.01	551.49	RW7	22.26	22.24	0.02	548.71
C2	15.57	15.55	0.02	555.63	C2	16.41		0.00	554.77	C2	18.12	18.08	0.04	553.10
C3	9.25	9.24	0.01	558.21	C3	11.10	10.81	0.29	556.60	C3	13.30		0.00	554.15
D1	13.67		0.00	557.39	D1	14.99		0.00	556.07	D1	16.44		0.00	554.62
G3	16.74		0.00	554.62	G3	18.85		0.00	552.51	G3	21.02		0.00	550.34
I1	12.58		0.00	558.26	I1	15.45		0.00	555.39	I1	18.29		0.00	552.55
J2	12.05	10.93	1.12	555.42	J2	13.61	13.30	0.31	553.15	J2	17.14	15.95	1.19	550.39



**Table 2**  
**Recovery Well Product Thicknesses**  
**Sylvan Slough - Rock Island**  
**Delta No. A097-130**

9/5/2001					10/24/2001					11/15/2001				
Well No.	TOC Depth to Water (ft)	TOC Depth to Product (ft)	Product Thickness (ft)	Corrected Water Elevation (ft)	Well No.	TOC Depth to Water (ft)	TOC Depth to Product (ft)	Product Thickness (ft)	Corrected Water Elevation (ft)	Well No.	TOC Depth to Water (ft)	TOC Depth to Product (ft)	Product Thickness (ft)	Corrected Water Elevation (ft)
GM22D	23.45		0.00	547.68	GM22D	22.21	22.16	0.05	548.96	GM22D	23.69	22.87	0.82	548.16
GM23D	23.12		0.00	547.74	GM23D	21.80		0.00	549.06	GM23D	22.53		0.00	548.33
GM24S	19.69	19.50	0.19	550.77	GM24S	20.19	20.05	0.14	550.22	GM24S	20.07		0.00	550.22
GM24D	24.88	23.36	1.52	547.76	GM24D	24.11	22.11	2.00	548.95	GM24D	22.98		0.00	548.33
GM25D	24.06		0.00	547.82	GM25D	22.78		0.00	549.10	GM25D	23.54		0.00	548.34
GM28S	17.72	17.65	0.07	553.07	GM28S	18.55	18.35	0.20	552.36	GM28S	18.21		0.00	552.52
GM28D	23.91	22.72	1.19	547.97	GM28D	22.74	21.56	1.18	549.13	GM28D	22.37		0.00	548.47
GM29S	18.24		0.00	552.92	GM29S	18.82		0.00	552.34	GM29S	18.69		0.00	552.47
GM31	23.38		0.00	547.91	GM31	22.11		0.00	549.18	GM31	22.92	22.90	0.02	548.39
GM32	19.45	19.15	0.30	551.83	GM32	17.93	17.83	0.10	553.18	GM32	18.68	18.65	0.03	552.37
RW4	23.12		0.00	547.83	RW4	21.88		0.00	549.07	RW4	22.64		0.00	548.31
RW5	23.12		0.00	547.93	RW5	21.91	21.80	0.11	549.24	RW5	22.73	22.64	0.09	548.40
RW6	23.20		0.00	547.75	RW6	21.85	21.78	0.07	549.16	RW6	22.68		0.00	548.27
RW7	23.30	23.14	0.16	547.79	RW7	22.12	21.90	0.22	549.02	RW7	22.95	22.70	0.25	548.22
C2	18.12	18.08	0.04	553.10	C2	20.11		0.00	551.07	C2	20.09		0.00	551.09
C3	15.18		0.00	552.27	C3	15.93		0.00	551.52	C3	15.75		0.00	551.70
D1	17.75		0.00	553.31	D1	18.71		0.00	552.35	D1	18.47		0.00	552.59
G3	21.99		0.00	549.37	G3	22.17		0.00	549.19	G3	22.71		0.00	548.65
I1	19.15		0.00	551.69	I1	17.90		0.00	552.94	I1	18.67		0.00	552.17
J2	17.52		0.00	548.97	J2	16.93	16.88	0.05	549.60	J2	17.36		0.00	549.13



**Table 2**  
**Recovery Well Product Thicknesses**  
**Sylvan Slough - Rock Island**  
**Delta No. A097-130**

12/19/2001					1/23/2002					2/19/2002				
Well No.	TOC Depth to Water (ft)	TOC Depth to Product (ft)	Product Thick- ness (ft)	Corrected Water Elevation (ft)	Well No.	TOC Depth to Water (ft)	TOC Depth to Product (ft)	Product Thick- ness (ft)	Corrected Water Elevation (ft)	Well No.	TOC Depth to Water (ft)	TOC Depth to Product (ft)	Product Thick- ness (ft)	Corrected Water Elevation (ft)
GM22D	23.01	22.27	0.74	548.77	GM22D	23.35	23.25	0.10	547.87	GM22D	23.18		0.00	547.95
GM23D	22.80		0.00	548.06	GM23D	22.91		0.00	547.95	GM23D	22.87		0.00	547.99
GM24S	20.09	19.89	0.20	550.38	GM24S	20.73	20.30	0.43	549.94	GM24S	21.13	20.44	0.69	549.76
GM24D	25.06	21.95	3.11	548.97	GM24D	23.78	23.30	0.48	547.95	GM24D	23.93	23.15	0.78	548.06
GM25D	22.87		0.00	549.01	GM25D	24.15		0.00	547.73	GM25D	24.04		0.00	547.84
GM28S	18.74	18.42	0.32	552.27	GM28S	18.76		0.00	551.97	GM28S	18.91		0.00	551.82
GM28D	21.85		0.00	548.99	GM28D	22.77	22.76	0.01	548.08	GM28D	22.69	22.68	0.01	548.16
GM29S	19.63	18.97	0.66	552.11	GM29S	19.94	19.18	0.76	551.89	GM29S	20.24	19.38	0.86	551.67
GM31	22.16	22.13	0.03	549.16	GM31	23.22		0.00	548.07	GM31	23.11		0.00	548.18
GM32	18.17		0.00	552.85	GM32	19.00	18.97	0.03	552.05	GM32	18.91	18.90	0.01	552.12
RW4	21.83		0.00	549.12	RW4	22.97		0.00	547.98	RW4	22.85		0.00	548.10
RW5	22.06	21.91	0.15	549.12	RW5	22.97	22.93	0.04	548.12	RW5	22.90	22.86	0.04	548.19
RW6	21.85	21.80	0.05	549.14	RW6	23.01		0.00	547.94	RW6	22.98	22.95	0.03	548.00
RW7	22.14	21.87	0.27	549.05	RW7	23.47	23.14	0.33	547.77	RW7	23.14	22.93	0.21	547.99
C2	19.96		0.00	551.22	C2	20.50	20.40	0.10	550.77	C2	20.75	20.55	0.20	550.61
C3	15.65		0.00	551.80	C3	16.20		0.00	551.25	C3	16.44		0.00	551.01
D1	18.75		0.00	552.31	D1	19.10		0.00	551.96	D1	19.35		0.00	551.71
G3	21.80		0.00	549.56	G3	22.87		0.00	548.49	G3	22.75		0.00	548.61
I1	18.15		0.00	552.69	I1	19.05		0.00	551.79	I1	18.95		0.00	551.89
J2	16.86	16.81	0.05	549.67	J2	17.86	17.83	0.03	548.66	J2	17.89	17.88	0.01	548.61

**Table 2**  
**Recovery Well Product Thicknesses**  
**Sylvan Slough - Rock Island**  
**Delta No. A097-130**

3/5/2002					4/3/2002					5/9/2002				
Well No.	TOC Depth to Water (ft)	TOC Depth to Product (ft)	Product Thick- ness (ft)	Corrected Water Elevation (ft)	Well No.	TOC Depth to Water (ft)	TOC Depth to Product (ft)	Product Thick- ness (ft)	Corrected Water Elevation (ft)	Well No.	TOC Depth to Water (ft)	TOC Depth to Product (ft)	Product Thick- ness (ft)	Corrected Water Elevation (ft)
GM22D	23.47		0.00	547.66	GM22D	21.10		0.00	550.03	GM22D	17.40		0.00	553.73
GM23D	22.95		0.00	547.91	GM23D	20.66		0.00	550.20	GM23D	16.77		0.00	554.09
GM24S	20.95	20.35	0.60	549.87	GM24S	20.02	19.99	0.03	550.30	GM24S	16.35		0.00	553.94
GM24D	24.15	23.55	0.60	547.69	GM24D	21.10	21.05	0.05	550.25	GM24D	17.42	17.29	0.13	554.00
GM25D	24.22		0.00	547.66	GM25D	21.70	21.60	0.10	550.27	GM25D	18.15	18.05	0.10	553.82
GM28S	19.95		0.00	550.78	GM28S	18.48		0.00	552.25	GM28S	15.65		0.00	555.08
GM28D	22.90		0.00	547.94	GM28D	20.60		0.00	550.24	GM28D	16.75		0.00	554.09
GM29S	20.18	19.38	0.80	551.68	GM29S	19.22	19.03	0.19	552.11	GM29S	16.27		0.00	554.89
GM31	23.42		0.00	547.87	GM31	21.04	21.03	0.01	550.26	GM31	17.14		0.00	554.15
GM32	19.03	19.02	0.01	552.00	GM32	16.76	16.75	0.01	554.27	GM32	12.87		0.00	558.15
RW4	23.19		0.00	547.76	RW4	20.80		0.00	550.15	RW4	16.94		0.00	554.01
RW5	23.07	23.06	0.01	547.99	RW5	20.84	20.74	0.10	550.30	RW5	17.50	16.78	0.72	554.18
RW6	23.19	23.14	0.05	547.80	RW6	21.05	20.83	0.22	550.09	RW6	17.17	16.97	0.20	553.96
RW7	23.62	23.47	0.15	547.46	RW7	20.90		0.00	550.05	RW7	17.25	17.20	0.05	553.74
C2	20.82	20.49	0.33	550.65	C2	20.20	20.05	0.15	551.11	C2	16.54	16.48	0.06	554.69
C3	16.33		0.00	551.12	C3	15.88		0.00	551.57	C3	12.05		0.00	555.40
D1	19.38		0.00	551.68	D1	18.92		0.00	552.14	D1	16.00		0.00	555.06
G3	22.77		0.00	548.59	G3	20.59		0.00	550.77	G3	17.25		0.00	554.11
I1	19.04		0.00	551.80	I1	16.77		0.00	554.07	I1	12.90		0.00	557.94
J2	18.11	18.10	0.01	548.39	J2	16.28	16.20	0.08	550.28	J2	12.58	12.41	0.17	554.06

Table 2  
Recovery Well Product Thicknesses  
Sylvan Slough - Rock Island  
Delta No. A097-130

6/12/2002					7/16/2002				
Well No.	TOC Depth to Water (ft)	TOC Depth to Product (ft)	Product Thick- ness (ft)	Corrected Water Elevation (ft)	Well No.	TOC Depth to Water (ft)	TOC Depth to Product (ft)	Product Thick- ness (ft)	Corrected Water Elevation (ft)
GM22D	16.46		0.00	554.67	GM22D	20.44		0.00	550.69
GM23D	16.05		0.00	554.81	GM23D	20.19		0.00	550.67
GM24S	15.45		0.00	554.84	GM24S	18.05	17.65	0.40	552.59
GM24D	16.48		0.00	554.83	GM24D	21.74	20.38	1.36	550.76
GM25D	17.71	17.66	0.05	554.21	GM25D	21.41		0.00	550.47
GM28S	14.50		0.00	556.23	GM28S	15.88		0.00	554.85
GM28D	15.90		0.00	554.94	GM28D	19.89		0.00	550.95
GM29S	15.15		0.00	556.01	GM29S	16.75		0.00	554.41
GM31	16.60	16.32	0.28	554.94	GM31	20.62	20.38	0.24	550.88
GM32	12.13		0.00	558.89	GM32	16.34		0.00	554.68
RW4	16.13		0.00	554.82	RW4	20.18		0.00	550.77
RW5	16.77	16.00	0.77	554.95	RW5	20.61	20.50	0.11	550.54
RW6	16.43	16.22	0.21	554.70	RW6	20.42	20.21	0.21	550.71
RW7	16.58	16.51	0.07	554.43	RW7	20.52	20.42	0.10	550.52
C2	15.63	15.62	0.01	555.56	C2	17.71	17.65	0.06	553.52
C3	10.49	10.47	0.02	556.98	C3	12.96	12.85	0.11	554.59
D1	14.76		0.00	556.30	D1	16.32		0.00	554.74
G3	16.21		0.00	555.15	G3	19.33		0.00	552.03
I1	12.14		0.00	558.70	I1	16.56		0.00	554.28
J2	11.78	11.23	0.55	555.19	J2	15.66	14.77	0.89	551.61

**Notes:**

TOC = top of well casing.

Corrected ground water elevation assumes product specific gravity of 0.875.

## FIGURES





